



Serial No. 09/182,279

2162

YO9-98-313

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Don Coppersmith et al.

Serial No.: 09/182,279

Group Art Unit: 2764

Filed: October 29, 1998

Examiner: C. Nguyen

For: SYSTEM FOR PROTECTING GOODS
AGAINST COUNTERFEITING

Assistant Commissioner for Patents
Washington, D.C. 20231

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SUBMISSION OF APPELLANT'S BRIEF ON APPEAL

Sir:

Submitted herewith please find an original and two copies of Appellant's Brief on Appeal. Please charge the statutory fee of \$310 to Assignee's Deposit Account 50-0510 (IBM/Yorktown). Authorization is also given to charge any deficiencies in fees and credit any overpayment of fees to the same. A duplicate copy of this paper is attached.

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Respectfully submitted,

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Serial No. 09/182,279

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT
APPEALS AND INTERFERENCES**

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APPELLANT'S BRIEF ON APPEAL UNDER 37 C.F.R. § 1.192(c)

Sir:

The following comprises Appellant's Brief on Appeal against the final rejection dated February 28, 2001, rejecting claims 1-21, all claims pending. This Appeal Brief is filed in triplicate and is accompanied by the required appeal fee set forth in 37 C.F.R. § 1.17(f). Appellant's Notice of Appeal was filed on May 29, 2001, less than two months from the filing of the present brief.

REAL PARTY IN INTEREST

The real party in interest in this appeal is International Business Machines Corporation (IBM), assignee of the entire interest in the above identified patent application.

RELATED APPEALS AND INTERFERENCES

The Appellant, their legal representative and the assignee are presently unaware of any appeal or interference which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

STATUS OF THE CLAIMS

This is an appeal from the final Office Action dated February 28, 2001, wherein claims 1-21 were finally rejected under 35 U.S.C. § 103. Claims 1-21 are appealed and are set forth in their entirety in Appendix A.

STATUS OF THE AMENDMENTS

In response to the first Office Action of mailed March 2, 2000, Applicants filed an amendment making minor grammatical amendments to the specification and to claim 1 and traversing the prior art rejections for the reason that the rejections were unclear and did not provide a proper basis for response. Traversal arguments were also offered based on Applicant's comprehended understanding of the rejections.

On August 30, 2000, the Examiner issued a second non-final Office Action, explicitly withdrawing the previous grounds of rejection and, in their place, making many new grounds of rejection, equally unclear and confusing. In addition, on page 11 of the second non-final Office Action the Examiner seemed to reinstate the rejections from the first Office Action in addition to the new rejections, further adding to the confusion.

On November 29, 2000, the undersigned attended a personal interview with the Examiner in an attempt to resolve some of the confusion. While no agreement was reached, the Examiner did concede that none of his rejections addressed independent claim 21 which was directed to a second embodiment of the invention and agreed conduct a further search and issue a third non-final Action.

Further during the course of the interview, the Examiner indicated that his art unit deals with e-commerce cases which, with all the recent publicity, are subject to additional levels of review once allowed by the Examiner. Therefore the Examiner was hesitant to allow cases he deemed e-commerce. The undersigned noted that this case was not e-commerce *per se*, but rather a system for verifying the authenticity of manufactured goods using smart cards. However, regardless of whether or not the Examiner considers this case an e-commerce application, the standard of review remains the same. While e-commerce cases may be subject to multiple levels of review, they are not subject to a different standard of *prima facie* obviousness under § 103.

On February 28, 2001, the Examiner issued a final Office Action, despite the fact he indicated at the personal interview the next action would be non-final (see Examiner Interview Summary of November 29, 2000). This final Office Action was 26 pages long. The first 13 pages made no specific rejections but rather generally discussed the unpatentability of the claims based on newly cited references as well as previously cited references. The Examiner thereafter cited approximately twenty-five (25) Board, CCPA, and CAFC, appeals decisions and discussed each one, in no particular or organized order using boiler plate language found in the MPEP for each one.

The remaining 13 pages of the final Office Action set forth various old and new grounds of rejection in such a convoluted manner that it is not possible to reasonably respond. On page 22 of the final Office Action in the section titled "Conclusion" and on page 23 in the section titled "Notes", the Examiner again begins to generally discuss the unpatentability of the claims based on numerous other prior art references, again without making any specific rejections.

On March 29, after numerous phone calls, the undersigned was able to speak to the Examiner's Supervisor, Vincent Millin, and requested that he review the file and provide some supervision to Examiner Cuong H. Nguyen. Examiner Millin indicated that he was concerned and would review the case. After leaving several telephone messages for Examiner Millin over the following weeks with no return calls, Applicant's filed the present Appeal to

the Board.

There are no un-entered amendments present in this case at this time.

SUMMARY OF THE INVENTION

In order to verify the authenticity of manufactured goods, a smart tag is attached to the goods containing encrypted authentication information, such as a serial number, a description of the good's physical appearance or chemical composition, its color, or digital images of the good etc. The encryption procedure comprises public/private key encryption with zero-knowledge protocols. Zero knowledge protocols allow a smart tag to be authenticatable and yet be duplication resistant by allowing the verifying agent to convince him/herself that the smart tag is authentic without revealing its authentication information. The verification procedure can be done using a reader at a point of sale (POS) machine equipped with the appropriate public key and zero-knowledge protocols to decrypt the authentication information. A printed version of the serial number or other authentication information may be placed on the goods in human readable form to quickly verify the information electronically read from the smart tag. With the present invention, only the manufacturer can create such smart tags with the associated data thus making it virtually impossible to pass off a counterfeit good as authentic. In addition to authenticating counterfeit goods, the present invention can be used to detect authentic goods being sold in a parallel market.

Referring to Figure 1, for example, there is shown a block diagram of the present invention. A legitimate manufacturer 101 commands a serial number generator 102 to generate sequences of serial numbers. These serial numbers can be just consecutive numbers, or contain uncoded and/or coded information as exemplified in Figure 2. The legitimate manufacturer 101 also possesses private keys, 103 and 104, and the corresponding public keys, 109 and 110, from private 30 key/public key pairs as available now in many forms. Public key encryption involves the use of private/public key pairs. The private key is known only to the manufacturer. Using a corresponding public key

provided by the manufacturer, the consumer or law enforcement agent can verify that, the encrypted version matches the serial number. An advantage to this method is that only the manufacturer can produce matching pairs. The wide spread availability of the public key does not compromise the security of the private key. The public key for verification can be made available on the product itself or by the manufacturer for example over the Internet. Zero knowledge protocols may be used to allow a smart tags to be authenticatable and yet be duplication resistant by allowing the verifying agent to convince him/herself that the smart tag is authentic without the smart tag revealing its authentication information.

Referring still to Figure 1, the serial number generated by generator 102 is encrypted using the private keys 103 and 104. The serial number and its encrypted version from 103 are communicated to printer-1 at block 105, while the encrypted versions from private key 104 is communicated to smart card writer at block 106. Printer 1 at block 105 prints a visible label 107 and the smart card writer at block 106 produces a smart card 108 containing the coded information prepared at 104. The visible label is attached to the product, while the smart card 108 is either attached to the product or simply packaged with the product. The legitimate manufacturer 101 makes the public keys, 109 and 110, accessible to the customer or law enforcement agents 112, for instance through a link of the Internet World Wide Web (WWW) 111. The customer can verify authenticity in a first stage by examining the visible label using public key 109 or verification can be performed by the customer after the purchase by examining the hidden label using public key 110. The cashier may verify the authenticity of the product from the visible label in front of the customer with a point of sale (POS) machine 115 such as a cash register equipped with the appropriate public key and, if desired, a smart card reader.

ISSUES

1. Whether the prior art rejections set forth by the Examiner are stated with enough specificity to afford Applicant opportunity to prepare a

reasonable response?

2. Whether the dicta set forth in the numerous Office Actions, generally discussing the obviousness of the invention with reference to various prior art, but making no specific rejection, is unduly prejudicial and further defeats the intent and purpose of 35 U.S.C. § 132 and should therefore be expunged from the record by the Board?

3. Whether the claims are allowable over the prior art of record?

GROUPING OF THE CLAIMS

The rejected claims do not stand or fall together. Claims 1, 16, and 21 are independent. Claim 1 and its dependent claims 2-15 are directed to a system for verifying the authenticity of a manufactured product. Claim 16 and its dependent claims 17-20 are directed to a method for verifying the authenticity of a manufactured product. Finally, claim 21 is directed to a method of detecting goods being sold in a parallel market. Each of the dependent claims adds a further feature not suggested by the respective independent claim.

ARGUMENT

As a matter of law, the prior art rejections are not set forth with any specificity which would afford Appellant an opportunity to reasonably respond. The Office Actions comprising the Official Record are unorganized and unprofessional comprising numerous pages of unorganized thoughts and prejudicial statements and irrelevant case law, which would defeat the purpose of 35 U.S.C. § 132. Indeed, the claims are interpreted, among other things, in light of the official record and cited prior art. In the case at hand no reasonable person could gain any insight by reviewing the Examiner's Office Actions.

Further, as a matter of fact, the Examiner's analysis of the references

with regard to the claimed invention is fatally flawed and erroneous for the reasons given below.

THE PRIOR ART

As best as can be understood, the prior art rejections made in the final Office Action are set forth below:

1. Page 3 generally discusses the unpatenrability of the invention in dicta regarding a newly cited article titled "***Metorail to take a high tech trip with smart card***", Washington Post, 7/5/1998; although, no specific rejections are made based on this reference. However, on page 4, after summarizing this article the Examiner makes the unsupported, prejudicial statement "That is the sole purpose of this application" and even underlined it.

Since no rejection to any claim has been made using the *Metrorail* no reasonable response can or should be made.

2. On page 6 of the Office Action, the Examiner discusses Appellant's previous response and generally discusses the unpatentability of the claims over "Fuji" ("Fuji-Keizai USA, Inc.") and "GemPlus" which are articles relating to smart cards. However, in the dicta discussion, the Examiner appears to be relying on Fuji alone by stating on page 7, lines 6-7 by stating:

"attaching an electronic tag/(smart card) to a product for a purpose is not an inventive concept because it is so obvious with one of skill in the art for one purpose like this".

3. On page 14 the Examiner rejects claims 1, 5-6, 8-10, and 15 over Fuji-Keizai USA, Inc. (Fuji). However, on page 14, line 12 of the rejection the examiner makes the statement "see also Chew (U.S. Pat. 5,901,303)". Thus, it is uncertain what claims are rejected over Fuji alone or what claims are rejected over the combination of Fuji and Chew.

4. On page 15 paragraph "D", the Examiner discusses claim 8 and then out of nowhere discusses the "Sony" corporation. Applicants cannot reasonably respond to this type of statement.
5. On page 16, paragraph "G", the Examiner states that claim 18 is obvious since it is similar to claim 10. However, no actual rejection is ever made to claim 18. Further, claim 18 is a dependent method claim and claim dependent 10 is an apparatus-type claim. Thus, it is unclear how these claims can be "similar". It is not possible for applicants to reasonably respond to this rejection.
6. On page 16, paragraph "H", the Examiner rejects claim 15 "with the rationale for the rejection in claim 1". The Examiner thereafter directs Appellant to "see a court case for an integration characteristic". This suggests that Appellants are now required to do legal research to support the Examiner's position. This is of course ridiculous and cannot be responded to in any reasonable manner.
7. On page 16, line 16, the Examiner summarizes the rejections by stating:
"In summary, the same analysis and reasoning set forth in the rejection of claim 1 are applied to these claims also because they are directed to a system that comprises similar means with very obvious limitations" (emphasis added).

It is respectfully submitted that this makes no sense. First, what is the "same analysis"? There are 14 pages leading up to the "analysis" of claim 1. Further, which claims are "these claims". Third, with the limited exception of claim 6 none of the claims are written in "means-plus-function" language. Therefore the statement that all claims "*comprise similar means*" is unintelligible and cannot be responded to in any reasonable manner.

8. On page 17, paragraph 17, the Examiner discusses the obviousness of

claim 3 and says "see also Storch (US Pat. 5,367,148)". The word "also" implies that Storch is being combined with other art. However, since no actual rejection is ever made against claim 3 and no other art is mentioned, this "rejection" cannot be reasonably responded to.

Further, in paragraph 17, claim 4 is rejected over Fuji and U.S. Patent 5,740,250 to Mob. However, this appears to be merged into the rejection of claim 3 above which also includes Storch in combination with some unknown art. Thus, this rejection cannot be reasonably responded to.

9. On page 17, paragraph 19, the Examiner has rejected claim 7 as being unpatentable over Fuji in view of Guillou "(US Pat. ...,634)". Here, the Examiner has not even bothered to give Applicant's a full patent number. The Examiner then rejects claim 17 using the same rationale as for claim 7. However, again, the Examiner is mixing rejections for apparatus claims and method claims with no coherent reasoning or explanation. Thus, these rejections as presented cannot be reasonably responded to.
10. On page 18, paragraph 22, the Examiner has rejected claim 11 over Fuji in view of Storch (US Pat. 5,367,148) and refers applicant to "at least Fig. '148 Fig. 3". However, Fig. 3 is merely a bar code label. This does not appear to have any relation to claim 11 and cannot be reasonably responded to.
11. On page 19, paragraph 23, the Examiner rejects claim 12 over Fuji and further appears to be relying on the "apple" in "Apple Computer's" trademark in combination with Fuji. Using a trademark as prior art under § 103 is highly unusual and the relevancy cannot be determined. Thus, this cannot be reasonably responded to.
12. On page 19, paragraph claims 13 and 20 are rejected under § 103 as

being unpatentable over Fuji in view of DiCesare. The Examiner does not bother giving Applicant a patent number, but it is assumed he is referring to U.S. Patent 5,971,435. Again, the Examiner provides no rational or motivation to combine other than to point to a column number in DiCesare and inform applicant that the recited limitation can be found there. Further, claim 20 is rejected for the same rational as 13 even though one claim is an apparatus and the other is a method. This rejection cannot be reasonably responded to.

13. On page 20, paragraph 25, the Examiner has rejected claims 14 and 19 as being unpatentable over Fuji in view of U.S. Patent 5,164,988 to Matyas. And has further incorporated the rejection to claim 1. However, since the rejection to claim 1 cannot be understood, the rejection to claims 14 and 19 cannot be reasonably responded to.
14. On page 21 of the Office Action, paragraph 26, the Examiner has rejected claims 16 and 21 under § 103, not over any particular prior art, but for "*[t]he same analysis and reasoning set forth in the rejection of claims 1-15*". This rejection is improper on its face and cannot be responded to in any reasonable fashion.

ISSUE I:

With regard to the first issue, Appellants argue that the prior art rejections set forth by the Examiner are not stated with enough specificity to afford Applicant opportunity to prepare a reasonable response.

It is respectfully submitted that the Examination in this case has been unprofessional and unduly protracted on the part of the USPTO. Applicant have made every reasonable attempt to place this case back on track by personally interviewing the case with the Examiner as well as attempting to involve the Examiner's supervisor.

The prior art cited in this case by the Examiner has been voluminous.

From the 892 forms, it can be seen that in the first Office Action, the Examiner cited 11 references and used 7 of these references in actual rejections or in general discussions concerning the unpatentability of the claims in general.

In the second Office Action, while no substantive amendments were made to the claims, the Examiner cited 4 new references (all database articles) which he used in general discussions of unpatentability as well as actual rejections in addition to maintaining all of the previous incoherent rejections from the first Action.

In the third and final Office Action, after a personal interview and with no amendments to the claims which would precipitate a further search, the Examiner cited 11 new references, made 14 new grounds of rejection and appears to maintain all of the previous grounds of rejection from the first and second Office Actions.

In addition, the Examiner has cited literally dozens of case law citations with detailed, albeit canned, analysis of the case law. In many places, and particularly in the second Office Action, the Examiner has told Appellant to seek their own case law to back the Examiner's arguments.

It is respectfully submitted that no reasonable person could or should have to respond to this type of examination.

ISSUE II:

With regard to the second issue, it is respectfully submitted to the Board that the dicta set forth in the numerous Office Actions, generally discussing the obviousness of the invention with reference to various prior art documents, trademarks, and company names, but making no specific rejection, is unduly prejudicial. As the Board appreciates, patent claims are later interpreted, among other ways, based on the record contained in the Official record contained in the file wrapper. The Official record in this case is so convoluted and disorganized, that no reasonable person could interpret Applicant's claims based on the record as it now stands.

The Board is referred to Ex Parte Blanc, 13 USPQ2d 1383 (BPAI, 1989). Here, the Board found that the existing situation does not permit

rational isolation and determination of the legal issues which may be present since the Examiner has applied too many grounds of rejection. The Board stated:

"As we see it, the examiner's statement of rejection includes no fewer than 40 separate rejections of the appealed claims. By setting forth such a broad-brush statement and by failing to explain with a reasonable degree of specificity any one rejection, the examiner has failed, procedurally, to establish a prima facie case of obviousness. As the court said in Herrick, "[a] rejection so stated defeats the intent and purpose of 35 U.S.C. 132". Accordingly, we shall reverse the examiner's rejections. In so doing, we repeat the statement in Herrick, quoting from Ball & Roller Bearing Co. v. F. C. Sanford Mfg. Co., 297 F.2d 163, 167 (2d Cir. 1924):

"[i]t seems necessary to apply to patent [prosecution] litigation from time to time the maxim that one cannot make omelettes of bad eggs-no matter how many are used. One good reference is better than 50 poor ones, and the 50 do not make the one any better".

The present case at hand the Examiner has applied numerous "bad egg" references/rejections and continues to add more with each subsequent Office Action while never removing the old rejections. This type of examination runs counter to 35 U.S.C. § 132 which dictates the procedure of notifying Applicant of the reasons for rejection and affording Applicant a reasonable opportunity to respond.

Further, Appellant's application has been prejudiced by the examination of this case. The Office Actions comprising the Official Record is unorganized and sloppy comprising numerous pages of unorganized thoughts and prejudicial statements. As the Board will appreciate, the claims are interpreted, among other things, in light of the official record and cited prior art. In the case at hand no reasonable person could gain any insight by reviewing the Examiner's Office Actions. It is therefore respectfully requested that the Board expunge the from the record the comments of the Examiner in the three Office

Actions.

ISSUE III:

It is respectfully submitted that Appellant does not need to rehash all of the reasons for patentability at this time. Indeed, such an exercise is deemed impossible since the grounds of rejection cannot be determined with any specificity.

Despite the large number of references used by the Examiner to reject the claims, all rejections are based on the primary reference to Fuji. It is respectfully submitted that Fuji is absolutely unrelated to using smart cards to authenticate goods or to identify counterfeit goods. Further, none of the secondary prior art, relied on by the Examiner in combination with Fuji, remotely teaches or suggests using a smart card to authenticate goods to detect counterfeits.

The title of the Fuji is "Top 40 High Tech Companies in Europe: Gemplus, France, Analysis of Factors/Strategies for Company's Success, Future Plans and Business Opportunities in the Industry". As the title implies, the article is about the Gemplus Company who is apparently a company in the business of manufacturing smart cards and smart card readers. The article indicates that smart cards are used in a number of various applications including computer security, information highways, healthcare, banking, telecommunication, and instant encryption and decryption of data. However, the article does not teach or suggest attaching a smart card to a product or good such the authenticity of the good can be readily verified.

Similarly, Chew is directed to smart cards and more particularly to reducing card /reader interface complexity. With the reduced complexity, Chew suggests that smart cards may be designed into mobile phones, prepaid telephone cards, electronic purses, pay TV, etc. (see, column 3, lines 45-61). Again, nothing in Chew, alone or in combination with Fuji, teaches or suggests attaching a smart card to a product or good such the authenticity of the good

can be readily verified.

Matyas is directed to a public/private key encryption system. As discussed in column 8, lines 50 *et seq.*, "A network is configured so that a first data processor provides a certification center function for the network. A second data processor in the network functions as client device A, which will seek certification of its public keys by the certification center. A third data processor in the network functions as client device B, which will seek certification of its public keys by the certification center. In accordance with the invention, the certification center will encode the network security policy into a configuration vector which is transmitted to each client device A and B in the network".

Matyas thus has absolutely nothing to do with smart cards and does not, alone or in combination with Fuji, teach or suggest attaching a smart card to a product or good such the authenticity of the good can be readily verified.

DiCesare is directed to a method for verifying the authenticity of an autograph. DiCesare requires that when a celebrity autographs an item, a person witnessing the autograph provides a numbered certificate of authenticity, and thereafter stores the number in a database. Again, nothing in DiCesare, alone or in combination with Fuji, teaches or suggests attaching a smart card to a product or good such the authenticity of the good can be readily verified.

Guillou is directed to a signing messages using zero-proof protocol and verifying the authenticity of banking or smart cards using zero-knowledge proof protocols. However, nothing in Guillou, alone or in combination with Fuji, teaches or suggests attaching a smart card to a product or good such the authenticity of the good can be readily verified.

Mob is directed to a tame automorphism based encryption system or scheme. Other than mentioning public and private key encryption, Mob is unrelated to the present invention. That is, nothing in Mob, alone or in combination with Fuji, teaches or suggests attaching a smart card to a product

or good such the authenticity of the good can be readily verified.

Storch is directed to counterfeit detection using ID numbers having a random portion. The randomness of the ID numbers makes it difficult for a counterfeiter to anticipate the numbers. Unlike the other references cited by the Examiner, at least Storch is directed to identifying counterfeit products. However, nothing in Storch, alone or in combination with Fuji, teaches or suggests attaching a smart card to a product or good such the authenticity of the good can be readily verified.

MPEP § 2143, titled "**Basic Requirements for a *Prima Facie* case of Obviousness**", mandates that:

"To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claimed limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not applicant's disclosure." (emphasis added).

Claim 1 recites "A system for verifying authenticity of a manufactured product, comprising: an electronic tag attached to one of said product and product packaging, said electronic tag comprising a memory for storing authentication information for said product in encrypted form; and a reader equipped with a decryption key for reading said authentication-information from said electronic tag to verify that said product is authentic" (emphasis added).

Similarly, independent claim 16 recites "A method for verifying the authenticity of a manufactured product, comprising the steps of: generating authentication information for a manufactured product; encrypting said

authentication information using a private key; storing said encrypted information in electronic tag; attaching said electronic tag to one of said manufactured product and manufactured product packaging; reading said encrypted authentication information from said electronic tag; and decrypting said encrypted information using a public key corresponding to said private key to verify that said manufactured product is authentic" (emphasis added).

Here, Applicants are claiming smart cards (e.g., electronic tags) for a specific purpose. That is, they are attached to goods in order that a consumer or law enforcement agency can readily tell whether or not the good is counterfeit (i.e., to verify authenticity). The Examiner has cited Fuji which teaches nothing more than the existence and popularity of smart cards. However, Applicant's are not claiming to be the first to invent smart cards. Indeed, as Fuji and Chew shows, smart cards have been around for some time. The Examiner has relied on Matyas, Guillou, and Mob for teaching that various encryption methods are know. However, again, Applicant is not claiming to be the first to invent encryption, indeed encryption has been around for years. The Examiner has relied on DiCesare and Storch for teaching various methods for verifying the authenticity of a good. However, none of these methods teach or suggest using electronic tags to verify the authenticity of a good.

With regard to claim 21, the Examiner has provided absolutely no bases for rejecting this claim other than to state that it is rejected for the same rational as for claims 1-20. However, claim 21 is directed not to verifying the authenticity of a good, but rather identifying an authentic good being sold in a parallel market (i.e., a good wrongfully sold or resold in a high priced market). None of the prior art of record teaches or suggests the features recited in claim 21.

Based on the above discussion, it is respectfully submitted that the prior art cited by the Examiner does not make out a case of *prima facie* obviousness as required under § 103 and it is respectfully requested that the prior art rejections to the claims be withdrawn.

It is incumbent upon the Examiner to establish a factual basis to support

the legal conclusion of obviousness. In re Fine, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988). This objective can only be established by an objective teaching in the prior art or by cogent reasoning that the knowledge is available to one of ordinary skill in the art. In re Lalu, 747 F.2d 703, 223 U.S.P.Q. 1257 (Fed. Cir. 1988). Here there is none.

The PTO has the initial burden under section 103 to establish a *prima facie* case of obviousness. See, In re Piasecki, 223 USPQ 785, 788; In re Fine, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). The PTO can satisfy this burden *only* by showing some *objective* teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. In re Lalu, *supra*; see also, Ashland Oil, Inc. V. Delta Resins & Refractories, Inc., 776 F.2d 281, 297 n.24, 227 USPQ 657, 667 n.24 (Fed. Cir. 1985); ACS Hosp. Sys., Inc. v. Monteviore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). Here, the USPTO has not satisfied its burden.

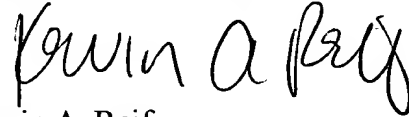
CONCLUSION

In sum, Appellants have invented a unique and non-obvious system for verifying the authenticity of manufactured goods. Appellant submits that, to the extent the rejections are understood, there is no reason, motivation, or suggestion found in the references to combine them in the manner urged by the Examiner.

Appellant submits that, in attempting to yield the claimed invention, the Examiner has strained the reasonable limits on what the cited references teach or suggest, in urging the prior art combination and in making his assertions as to what "would" have been done by the ordinarily skilled artisan in view of the prior art at the time of the invention. Clearly, the teachings in the prior art, taken single or, even assuming *arguendo*, in combination, fail to teach or suggest the claimed system providing the advantages described in the application and as defined by Appellant's claims.

Accordingly, Appellant submits that claims 1-21, all claims presently pending in the application, are patentable and are otherwise in condition for allowance. Therefore, Appellant respectfully requests the Board to reverse the final rejections of claims 1-21.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Kevin A. Reif". The signature is written in a cursive, flowing style.

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APPENDIX A

1 1 (Amended). A system for verifying authenticity of a manufactured
2 product, comprising:

3 an electronic tag attached to one of said product and product
4 packaging, said electronic tag comprising a memory for storing
5 authentication information for said product in encrypted form; and

6 a reader equipped with a decryption key for reading said
7 authentication information from said electronic tag to verify that said
8 product is authentic.

1 2. A system for verifying the authenticity of a manufactured product as
2 recited in claim 1 wherein said electronic tag is a smart card.

1 3. A system for verifying the authenticity of a manufactured product as
2 recited in claim 1 wherein said electronic tag is embedded into one of
3 said product and product packaging product.

1 4. A system for verifying the authenticity of a manufactured product as
2 recited in claim 1 wherein said authentication information is encrypted
3 using a private key and said reader decrypts said information using a
4 corresponding public key.

1 5. A system for verifying the authenticity of a manufactured product as
2 recited in claim 1 further comprising a point of sale machine containing
3 said reader for authenticating said product in front of a consumer prior
4 to purchase of the product.

1 6. A system for verifying the authenticity of a manufactured product as
2 recited in claim 1 wherein said reader comprises means for reading said
3 electronic tag without physically contacting said electronic tag.

1 7. A system for verifying the authenticity of a manufactured product as
2 recited in claim 1 wherein a zero-knowledge protocol is used to make
3 said authentication information resistant to duplication.

1 8. A system for verifying the authenticity of a manufactured product as
2 recited in claim 1 wherein said authentication information is directed to
3 a manufacturer of the product.

1 9. A system for verifying the authenticity of a manufactured product as
2 recited in claim 1 wherein said authentication information is specific to
3 the product.

1 10. A system for verifying the authenticity of a manufactured product
2 as recited in claim 1 further comprising a label having the
3 authentication information printed thereon to be verified against the
4 authentication information read by said reader.

1 11. A system for verifying the authenticity of a manufactured product
2 as recited in claim 9 wherein said authentication information comprises
3 one or more of product color, product shape, product serial number,
4 product weight, product routing information, and product chemical
5 composition.

1 12. A system for verifying the authenticity of a manufactured product

2 as recited in claim 9 wherein said authentication information comprises
3 a graphic image of the product.

1 13. A system for verifying the authenticity of a manufactured product
2 as recited in claim 9 wherein said authentication information comprises
3 an ownership history of the product.

1 14. A system for verifying the authenticity of a manufactured product
2 as recited in claim 1 wherein said authentication information is erased
3 from said memory after being read.

1 15. A system for verifying the authenticity of a manufactured product
2 as recited in claim 1 wherein said authentication information further
3 comprises information for authenticating said electronic tag.

1 16. A method for verifying the authenticity of a manufactured product,
2 comprising the steps of:
3 generating authentication information for a manufactured
4 product; encrypting said authentication information using a private key;
5 storing said encrypted information in electronic tag;
6 attaching said electronic tag to one of said manufactured product
7 and manufactured product packaging; reading said encrypted
8 authentication information from said electronic tag; and
9 decrypting said encrypted information using a public key
10 corresponding to said private key to verify that said manufactured
11 product is authentic.

1 17. A method for verifying the authenticity of a manufactured product
2 as recited in claim 16 further comprising the step of using a
3 zero-knowledge protocol to make said authentication information
4 resistant to duplication.

1 18. A method for verifying the authenticity of a manufactured product
2 as recited in claim 16 further comprising the step of attaching a printed
3 label to said product comprising said authentication information.

1 19. A method for verifying the authenticity of a manufactured product
2 as recited in claim 16 further comprising the step of erasing said
3 authentication information from said electronic tag after reading.

1 20. A method for verifying the authenticity of a manufactured product
2 as recited in claim 16 further comprising the step of recording an
3 ownership history of said product in said electronic tag.

1 21. A method for detecting manufactured products in a parallel market,
2 comprising the steps of:

3 generating authentication information for a manufactured
4 product including routing information for the product;

5 encrypting said authentication information using a private key;
6 storing said encrypted information in electronic tag;

7 attaching said electronic tag to one of the manufactured product
8 and manufactured product packaging;

9 reading said encrypted authentication information from said
10 electronic tag at a point of sale; and

11 decrypting said encrypted information using a public key

- 12 corresponding to said private key to verify said routing information
- 13 matches routing information of said point of sale to determine if said
- 14 manufactured product is sold in a parallel market.